

CLAIMS

[1] A parallel folding apparatus of a folding machine, comprising:

a first cylinder and a second cylinder arranged, with circumferential surfaces of said first cylinder and said second cylinder being in contact with each other, gripping/holding means of said second cylinder being arranged to parallel-fold a sheet in cooperation with knives of said first cylinder; and

a brush guide disposed along the circumferential surface of said first cylinder located upstream, in a rotating direction, of a point of contact between said first cylinder and said second cylinder,

and wherein said brush guide is provided so as to be movable toward and away from the circumferential surface of said first cylinder by drive means.

[2] The parallel folding apparatus of a folding machine according to claim 1, characterized in that

said brush guide is located at an operating position close to the circumferential surface of said first cylinder when the sheet is folded between said first cylinder and said second cylinder, and

said brush guide is separated from said operating position when the sheet is not folded between said first cylinder and said second cylinder.

[3] The parallel folding apparatus of a folding machine according to claim 1, characterized in that said first cylinder is a first jaw cylinder for forming a signature in cooperation with a folding cylinder, and

said second cylinder is a second jaw cylinder for folding said signature in cooperation with said first jaw cylinder, or for receiving said signature from said first jaw cylinder without folding said signature.

[4] The parallel folding apparatus of a folding machine according to claim 3, further comprising a plurality of said second jaw cylinders and a plurality of said brush guides.

[5] The parallel folding apparatus of a folding machine according to claim 1, characterized in that said drive means are provided at opposite end portions of a bar, which extends in an axial direction while supporting said brush guide, and are driven and controlled independently of each other.

[6] The parallel folding apparatus of a folding machine according to claim 1, characterized in that said drive means comprises a motor, a threaded shaft driven by said motor, and a bracket screwed to said

threaded shaft, and
said bar is supported pivotably about said bracket.

[7] The parallel folding apparatus of a folding machine according to claim 1, characterized in that said drive means is provided at a bar supporting said brush guide, and is driven and controlled according to folding specifications by control means.

[8] The parallel folding apparatus of a folding machine according to claim 1, further comprising a folding specifications input unit for inputting folding specifications, and control means for controlling said drive means according to the folding specifications inputted into said folding specifications input unit.

[9] The parallel folding apparatus of a folding machine according to claim 8, further comprising an adjustment input unit for actuating said drive means to adjust a contact pressure of said brush guide on said sheet being parallel-folded.

[10] The parallel folding apparatus of a folding machine according to claim 9, characterized in that said drive means is a pair of motors provided at

opposite end portions of said brush guide, and
said control device controls at least one of said
pair of motors based on an input into said adjustment
input unit.

[11] The parallel folding apparatus of a folding
machine according to claim 4, characterized in that
said second jaw cylinder comprises an upper second
jaw cylinder and a lower second jaw cylinder paired with
said brush guides,

and characterized by being capable of performing
upward merger delivery for transferring the sheet from
said first jaw cylinder only to said upper second jaw
cylinder, and up-and-down allocation delivery for
transferring the sheet alternately from the first jaw
cylinder to the upper second jaw cylinder, and from the
first jaw cylinder to the lower second jaw cylinder,

and further comprising control means for
controlling said drive means so as to separate said brush
guide located beside said lower second jaw cylinder from
an operating position during said upward merger delivery.